REMARKS

Claims 1-7 were withdrawn from consideration as being drawn to a non-elected species and claims 9 and 10 were canceled. Claim 8 is currently amended. Accordingly, claims 1-8 are pending in the application and claim 8 is presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

In the outstanding Office Action claim 8 was objected to because of informalities; claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,411,442 to Ota et al. in view of Japanese Patent No. 11-120594 to Kasami et al. and U.S. Patent No. 4,927,247 to Tanaka et al.; claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,349,083 to Kiriki et al. in view of Kasami et al., Tanaka et al. and Applicants' Admitted Prior Art (AAPA); and claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiriki et al. in view of Kasami et al., Tanaka et al., and U.S. Patent No. 5,835,473 to Shimozono et al.

The Office Action of November 18, 2004 has been reviewed and the comments therein carefully considered.

By this Amendment claim 8 has been amended to place the claim in better form. Support for the amendments to claim 8, lines 5 and 6 can be found for example, in original claim 8, and the originally filed specification in the description of Figures 12-14, 16, and 18. As amended, the rejections of claim 8 are traversed.

It is respectfully submitted that the above amendments do not introduce any new matter within the meaning of 35 U.S.C. § 132.

Claim Objection

The Examiner objected to claim 8 because of a lack of clear antecedent basis regarding the first surface and the second surface.

In response, Applicants have amended claim 8 by moving the terminology "a first surface" and "a second surface" to the first paragraph of the claim following --a single lens-- to provide clear antecedent basis.

Therefore, as amended, Applicants respectfully request that the objection to claim 8 be withdrawn.

Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claim 8 as being unpatentable over Ota et al. in view of Kasami et al. and Tanaka et al.; rejected claim 8 as being unpatentable over Kiriki et al. in view of Kasami et al., Tanaka et al., and AAPA; and rejected claim 8 as being unpatentable over Kiriki et al. in view of Kasami et al., Tanaka et al., and Shimozono et al.

Reconsideration and withdrawal of the rejection is respectfully requested.

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all the claim limitations. Amgen,

Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

It is respectfully submitted that the combination of references fails to teach or suggest all the limitations as set forth in independent claim 8.

In addition to the objective lens of the present invention satisfying the four conditions recited in amended claim 8, the feature of the present invention resides in that the lens converges a light, which is emitted by a light source and enters a first surface of the lens on a light source side, at a focal point outside the lens.

On page 3 of the Office Action, the Examiner stated that Ota et al. fails to disclose a transmission layer having a thickness of 0.3 mm or less and a working distance of 0.3 mm or more. The Examiner cites Kasami et al. as teaching a 0.3 mm thick transmission layer and Tanaka et al. as teaching a working distance of at least 0.4 mm in an attempt to cure the deficiencies of Ota et al.

The Examiner also stated in the Office Action that Table 1, Example 5 in Ota et al. teaches a wavefront aberration of 0.04 λ or less when a first surface and a second surface are not co-axial by 5μm as recited in claim 8. Applicants, however, respectfully submit that this is not accurate.

Instead, Ota et al. merely discloses a concept of "Off-axis" that is quite different from the concept that "the first surface and the second surface are not co-axial as recited in claim 8." "Off-axis" means an aberration when luminous flux obliquely enters a lens, and is different from

al. shows image height characteristics. See column 19, lines 1-10. This is well known to those of ordinary skill in the art. This concept is also apparent from Table 1 of Ota et al. which shows "Angle of view" including angle data such as 1° and 2°. See column 27, line 8 to column 28, line 5.

In view of the above, Applicants respectfully submit that the present invention as recited in claim 8 patentably defines over Ota et al., Kasami et al., and Tanaka et al., taken either alone or in combination.

On page 4 of the Office Action, the Examiner stated that Kiriki et al. fails to disclose a transmission layer having a thickness of 0.3 mm or less, a working distance of 0.3 mm or more, and a wavefront aberration of 0.04 λ or less. The Examiner cites Kasami et al. as teaching a 0.3 mm thick transmission layer, Tanaka et al. as teaching a working distance of at least 0.4 mm, and AAPA as teaching a wavefront aberration of 0.04 λ or less in an attempt to cure the deficiencies of Kiriki et al.

On pages 4-5 of the Office Action, the Examiner stated that Kiriki et al. fails to disclose a transmission layer having a thickness of 0.3 mm or less, a working distance of 0.3 mm or more, and a wavefront aberration of 0.04 λ or less. The Examiner cites Kasami et al. as teaching a 0.3 mm thick transmission layer, Tanaka et al. as teaching a working distance of at least 0.4 mm, and Shimozono et al. as teaching a wavefront aberration of 0.04 λ or less in an attempt to cure the deficiencies of Kiriki et al.

The Examiner also stated in the Office Action that Kiriki et al. discloses that a numerical aperture is 0.78 or more based on Example 2 of Kiriki et al. where the numerical aperture = 1.19, in column 13, line 66. Applicants, however, respectfully submit that this is not accurate.

Rather, the lenses described in Examples 1-4 in Kiriki et al. are lenses having respective focal points inside themselves as shown in FIGs. 1, 4, 7 and 10.

In contrast, the lens according to the present invention has a focal point outside itself as clearly recited in amended claim 8. The numerical aperture = 1.19 in Kiriki et al. is a value when the refractive index n is 1.83319 (see TABLE 2). When the present invention is compared with Kiriki et al. with respect to a numerical aperture (NA), NAs in the air must be compared. Assuming that the lenses in Examples 1-4 are used in the air, an NA thereof is calculated as 0.65 (1.19/1.83319), which is less than 0.78. Accordingly, Kiriki et al. fails to disclose that the NA is 0.78 or more as recited in claim 8 of the present invention.

Further, though the lens in Example 5 shown in FIG. 13 of Kiriki et al. is one that has its focal point outside itself, the NA thereof is 0.68 (see TABLE 7), which is outside the range defined in claim 8. Furthermore, the lens in Example 6 shown in FIG. 15 of Kiriki et al. is also one that has its focal point outside itself and the NA thereof is 0.83. However, since the values in Kiriki et al. for R in TABLE 8 is 1.7433 and the focal length in TABLE 9 is 1.0, R1/f becomes 1.74, which is outside the range recited in claim 8 of the present invention.

In view of the above, Applicants respectfully submit that the present invention as recited in claim 8 patentably defines over Kiriki et al., Kasami et al., Tanaka et al., AAPA, and Shimozono et al. taken either alone or in combination.

Further, Applicants respectfully submit that the present invention of claim 8 patentably defines over the base references Ota et al. and Kiriki et al. taken either alone or in combination, and that Kasami et al., Tanaka et al., AAPA, and Shimozono et al. fail to cure the deficiencies of the base references.

Thus, all of the cited references fail to teach or suggest all the limitations of amended claim 8, to achieve the novel and non-obvious features of the present invention.

In addition, Applicants respectfully submit that the fact that the Examiner relies on a large number of references to reject one claim weighs against the obviousness of the claimed invention. *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants

respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

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